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METHOD AND SYSTEM FOR TRANSMITTING MEDIA INFORMATION THROUGH A NETWORK

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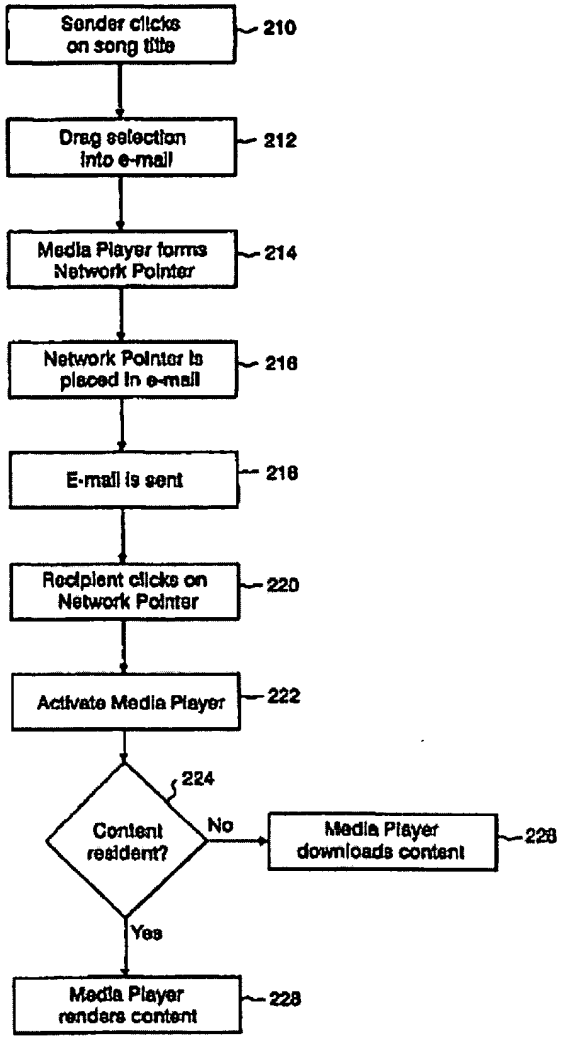
Abstract of **WO0043892**

A method for transmitting or distributing media information using Handle data structures (100) in e-mails or chat sessions. When a user sends a Handle (100) by e-mail (218) or active chat session to another user, the recipient is able to access the same media the sender accessed over the network. The Handle (100) can be used to govern and limit the use of the media by the recipient, for example, subject to payment. Furthermore the present invention can synchronize the rendition of the media at multiple locations for multiple users such that each user experiences the media at the same time regardless of the location.



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Description of **WO0043892**

METHOD AND SYSTEM FOR TRANSMITTING
MEDIA INFORMATION THROUGH A NETWORK
This application claims priority pursuant to 35 U. S. C.119 from
Provisional Patent Application Serial No. 60/116,555 filed January 21,1999, the entire disclosure of whi
is hereby incorporated by reference.

FIELD OF THE INVENTION
The present invention relates to transmitting media through a network, and in particular transmitting information specifying particular media or portions of media in order to govern and synchronize the rendition of such media.

BACKGROUND OF THE INVENTION

Internet technology affords users across the globe the ability to communicate, e. g., by electronic mail. T sender types or otherwise inputs a message into their personal computer and directs the message to a recipient. An application on the sender's computer establishes communication with a server connected t the Internet and transmits the message. The message may be sent from one server to another depending the recipient's address. Finally, the destination server transmits the message to the recipient's personal computer. The message may include any electronic data ranging from simple text to complex audio-vid material.

The entire process can be completed in a very short time.

With appropriate applications, such as ICQ and AOL's Instant
Messaging and depending on network traffic and performance, the communication can be so fast as to seem instantaneous to the users participating in the communication. This is achieved by transmitting the message as it is being inputted rather than waiting for the complete message to be input and then sendin it. The basic requirement for this type of communication is that both of the users have activated access t the Internet (i. e. both users must belogged on to the network). In addition, the message is usually limite to textual data. To the users, the effect is realtime dialog using electronic data. This system is referred tc Instant Messaging.

An extension of direct communication between the sender and a specific recipient or group of named recipients is dynamic group communication.

This system, referred to as Chat, is a conversation among several users where participants can join or le the conversation at any time. Chat groups may be open to the public or restricted, e. g., limited to persor with a password.

There is a need for the application of advanced communication to multi-media data. What is further nee is a system that transmits data sequentially but also has synchronization capabilities so that users in different locations can experience the same media at the same time. The present invention satisfies these and other needs.

SUMMARY OF THE INVENTION
The present invention is a method and system for transmitting media information through a network in order to specify particular media or portions of media and to govern and synchronize the rendition of su media. Media objects stored on a server or other device connected to the network are accessible by specifying a content reference using an application appropriate for the network. For example, a standard browser is appropriate for accessing media stored on an Internet server where the content reference is a uniform resource locator. To send a media object from one user to another, the sender need only send th content reference.

Conventional methods simply send only the location of the content. In the present invention, the content reference along with supplementary information ispackaged in a data structure called a Handle to facilit rendition of the media. A Handle may be sent to another user by E-mail, Chat, Instant Messaging, Cell Phone protocols orTV/Video links. When the recipient is ready to render the media object referenced by the Handle, the recipient accesses the Handle and activates the appropriate software application such as media or multi-media player. The software application provides an interface for the user to play the content. The Handle contains all the information needed to download content, and if applicable complet any commercial transactions pertaining to the use of the content. Specifically, the Handle includes information identifying each participant in the value chain, i. e., any entity that participated in the creati resolution or transmission of the content that might receive some compensation for their participation.

Typically, the player acquires the media object referenced by the
Handle by downloading it from the network. Then the player facilitates the rendition of the content, producing the audio and displaying the graphics or video, etc. The rendition may be subject to commerc limitations such as purchase of rights to use the content, in which case, the player or another application may facilitate the commercial transaction.

The player may also synchronize the rendition of the content at each of the users'locations. Using the supplemental information contained in the Handle, the rendering application, e. g. player, can coordinat playing the same content at the same time and rate at multiple locations.

The present invention is also applicable where the media is stored locally, for example, on disk or DVD on the user's personal computer, e. g., having been previously downloaded from the Internet.

BRIEF DESCRIPTION OF THE DRAWINGS
Fig.1 is a block diagram of an arrangement of a Handle data structure for implementing the present invention;
Fig. 2 is a flow chart showing a method for using the Handle in accordance with the preferred embodim of the present invention; and
Fig. 3 is a flow chart showing an alternative method for using the Handle in accordance with an alternat embodiment of the present invention.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT OF THE INVENTION
In the preferred embodiment of the present invention, e-mail and chat communication systems utilize Handles to provide linkages to content and synchronization of that content. Synchronization refers to playing the same content at multiple locations simultaneously such that each of the users is experiencin the same portion of content at the same time. The content referred to may be any multi-media data including, for example, text, graphics, music and music videos. The invention has application to all med with musical content being a preferred embodiment and not limiting of the scope of the present inventio

By way of overview and introduction, musical content, like other electronic data, may be distributed an transmitted over a network, such as the
Internet. Musical content tends to require large amounts of data and the more complex the content, such video material, the more voluminous the data. Because of the volume, it is not efficient to transmit the content in its entirety for every instance of reference. Instead of transmitting the content, only a referenc to the content is transmitted. When the user receives the reference, the user can access the content direct The content reference is referred to as a Handle and is discussed in detail below.

To support the electronic distribution of musical content and other media over the Internet, for example, software applications may be implemented at the user's personal computer. A media player is one such application and provides an interface for the user to play the music. Musical content commercially distributed over the Internet may be placed in a secure format to prevent unauthorized use. For such secured content, the player effectively decrypts or otherwise processes the content in preparation for playing. For example, the music may be encrypted in such a way as to prevent playing unless a payment made to the retailer or content owner for the use of the music. The player can assist the user in paying fc the use of the music and then playing the music accordingly, for example, byinterfacing with a payment clearinghouse and executing a payment transaction, as is well known in the art.
Theterms"play"or"render"with reference to the content include anything that can be done to or with the content, such as producing audio, displaying visual content, printing, and copying, etc.

The player may be used with content received over the Internet as well as locally stored content, i. e.,

stored on local or portable memory including diskettes, hard disks, optical disks, flash cards etc. The ter disk is used throughout the description to refer to any such local or portable memory and is not intended limit the scope of the invention. For content on disks, the player coordinates with the appropriate device such as a CD player or CD drive when rendering the content.

When the user engaging in e-mail or chat communications wishes to transmit content to another user, th user need not actually transmit the content itself but may instead send a reference to the content, namely Handle, so that the recipient may access the same content.

Referring to Fig.1, a Handle 100 is a small relatively secure data structure identifying particular content, and may contain various additional information about the content referenced. Content such as text, audi graphics, video, etc, is stored in data structures called Content Objects and an Object ID 110 may be included in the Handle as a reference uniquely identifying particular content.

The Object ID is essential for the effective implementation of a Handle. However, where a group of content objects are associated, a single Handle may contain more than one Object ID each referencing o content object.

Conceptually, each content object refers to an object in a product such as an album, single track, or EP (extended play). To identify the particular product containing the object, a numbering system such as th stock keeping unit (SKU) may be used. In such a case, the Handle would then include a SKU ID 112.

As applied in the commercial environment where content is sold and distributed, the Handle identifies tl content and all the participants of the value chain associated with the content. Together, the Object ID a SKU ID identify precisely what the content is. Other identifiers may also be included in the Handle to identify each of the value chain participants. Participants include, for example, the artist, the retailer, the network provider, the consumer, the software player vendor, the device manufacturer or licensor, the patent holder, etc. The Distributor ID 114 identifies the owner of or the agent of the owner of the Conte Object (s) referenced. The Retailer
ID 116 identifies a Retailer associated with the content referenced in the Handle. This may be the Retail from whom the content was purchased, or any Retailer that the
Distributor (content owner) wishes to reference. For video, the Channel ID (not shown) of a network ma be more appropriate than a Retail ID. The Channel ID may be, for example, HBO or ABC. The Rendere ID (not shown) refers to the software that created the Handle, such as the Real Jukebox, which may participate in the value chain (e. g. 50 basis points for transactions thatresulted from a purchase that resulted from a Handle it created). The CarrierID (not shown) may refer to anyone who is actually responsible for carrying the content. For example, the Carrier ID may be
AT & T if it was delivered over a telephone network or it could be the SD Memory
Association, to effect payment to the patent pool allowing the memory format which supports superdistribution.

These identifiers are useful when performing a commercial transaction related to the content, such as a purchase. An application that dynamically computes offers for the sale or rental of content may use the value chain information in conjunction with a database of commercial information to generate the offers One such application may be a reference service which maintains a database of commercial information from various participants of the value chain regarding the content. For example, a retailer may have contracted with a distributor for a 2% cut of the price provided the price is at least7% above manufactur cost and the retailer may havea mark up of 10% above cost. When a user wants to purchase particular content, the reference service can use the information in the Handle, such as the RetailerID, to determin valid offer based on the commercial information available from (or regarding) that retailer and provide t user with such an offer. The terms of an offer may be included in the Handle as well. For example, the u

may be presented with an offer to play the video for $2 per use anytime for a period of one year. Price, expiration date, and to whom payment is to be made are examples of terms that may be included in the Handle.

The concept of a Handle is flexible and can refer to content stored locally or remotely. If the content is stored remotely, it is accessible through connection to a network such as the Internet. Where the content accessible through the Internet, the Object ID may be aUniform Resource Locator (URL). Content store locally includes any kind of medium such as CD, DVD, Flash memory, and hard drive. For locally store content, a Disk ID 118 may be included in the Handle.

Typically, Handles are processor generated (e. g. by a computer or consumer device) when they are sent but they can be stored locally or on a server and retrieved as needed. When a user retrieves a Handle and wishes to send it to another user, a User ID 120 may be included in the Handle to identify the user who is now sending the Handle.

To facilitate synchronization (described in more detail below), the
Handle may contain the time when the Handle is sent and information about the rendition of the content the sender's location. For example, the Handle may include a Local Time ID 122 and an Absolute Time 124. The Local Time ID is the local time as known by the device rendering the content. The Absolute Time ID is the absolute time as known by the network, e. g. GMT. The Handle may also include a locat marker to indicate a particular point or place in the content. For example, if the content is a video, the marker may be set to a particular scene, so that the scene may be referenced directly. Such information i contained in a Temporal Location ID 126 which refers to a position, in the temporal domain, of the obje referenced. For example, a Temporal Location ID may be expressed in units of time, e. g.,1 minute: 23 seconds, or alternatively units of frames, e. g., 18 frames. In addition to marking a place in the content it useful to note the state of the content, such as play or pause.

The state of the content may be included in the Handle in the form of Temporal State
ID 128.

Handles may be specialized for specific environments or applications.

For example, Handles may be customized to create Network Handles which facilitate the electronic distribution of media over a network environment and the rendition of that media. A Disk Handle may b created to facilitate rendition of media stored locally. In addition, Handles may be customized to create Synch Handles which facilitate the synchronization of the rendition of the media in multiple locations. Each of these three examples is discussed below.

Network Handles usually contain the basic information needed to refer to, acquire and consume Conten Objects that have been electronically distributed over a network. A Network Handle would typically include the SKU ID, DistributorID, Retailer or Channel ID, Renderer ID, User ID and some number of ObjectIDs.

A user can attach a Network Handle in any number of ways, such as menu access, drag and drop, etc. Referring to Fig. 2, in a typical player environment the sequence is as follows: At step 210, the user clic on a song title or other display element, which refers to a Content Object. At step 212, the user drags the selection into an e-mail message. At step 214, the player software binds together all the identifiers into t Network Handle. The identifiers include the Object ID (s), SKU
ID, the User ID and identifiers for each of the participants of the value chain, e. g.,
Distributor ID, Retailer ID and Renderer ID. At step 216, the Handle is placed into the e-mail message. step 218, the e-mail is sent to the recipient. At step 220, the recipient reads the e-mail and opens or

accesses the Handle. At step 222, the e-mail application communicates with the operating system to call the application, which the user has designated to resolve Handles, usually, a media player application. T player may assist the user in acquiring and rendering the content. At step 224, the media playerdetermin whether the content is resident locally. Typically, the content may be resident locally if the user previou acquired the content and stored it locally. If the content is not resident, at step 226, the player uses the Handle to remotely access and download the content stored on some network server. Then at step 228, t media player serves as a user interface to facilitate the rendition of the content. The player uses the Han (possibly in conjunction with other information such as commercial terms set by a retailer for that conte to determine the range of uses for which the user is authorized and/or has paid.

Disk Handles work in a similar fashion as Network Handles. The typical sequence is as follows: User clicks on a song title or other display element which refers to content on the disk. User drags the selecti into an e-mail message.

The player software binds together the Object ID (s), SKU ID, UserID, and Disk ID for the content (e. g song). The player also binds the Retailer Id and identifiers for other value chain participants. The Disk Handle is placed into the e-mail message and the e-mail is sent to the recipient. The recipient then reads e-mail and opens or accesses the Handle, which results in the e-mail application communicating with th operating system to call the application, which the user has designated to resolve Handles, usually, a player application. The player renders the content (if it has the right to) and if the dis is available (inserted, attached, on network). If the content is not available, the user is given the choice c either inserting the disk (or connecting to the network) or going to a retail web site (on the Internet or ot network) to purchase the disk or its electronic equivalent.

Synchronization Handle (Synch Handle) is a specialized Handle that can be used in networked environments to synchronize two or more Content Objects that have temporal characteristics. To create Synch Handle, the player application typically binds together the Temporal Location ID, Temporal StateID, the Local Time ID, the Absolute Time ID and the Object ID into a Handle that can be attached to or inserted in an electronic communication (e. g. chat window). The Synch Handle may be either a Network Handle or a Disk Handle with temporal information (the Temporal LocationID, the Temporal State ID, the Local Time ID, and the Absolute Time ID). The temporal information is used to synchronize temporal rendition (e. g. playing audio or video) whenengaging in a dynamic chat.

Referring to Fig. 3, a sample usage scenario of the Synch Handle for a disk is as follows: At step310, th user clicks on a song title or other display element which refers to content on the disk. At step 312, the u drags this into ane-mail message. At step 314, the player software binds together Object ID (s), SKU ID DiskID, User ID and identifiers for the value chain participants, e. g. DistributorID, and RetailerID. Additionally, for synchronization it adds the Temporal Location ID, the Temporal StateID, the Local Time ID and Absolute Time ID to the Handle. At step 316, this Handle is placed into the e-mail message. At step 318, the message is sent to or seen by (as in chat environments) recipient (s). At step 320, the recipient opens or accesses the Handle. At step 322, the e-mail application communicates with the operating system to call the application which the user has designated to resolve Handles, usually, a player application. At step 324, the player renders the content (if it has the right to), if it is accessible (usually stored locally).

The player resolves the objects temporally in the following manner: At step 326, the player subtracts the Absolute Time ID in the Handle (when the Handle was created) from the current absolute time to find th amount of time lapsed between the instantiation of the Handle and its resolution. The result is the Transport Time. At step 328, the player takes the Temporal Location ID (where in the object (song) the

sender was when they sent it) and adds the Transport Time to determine where in the object (song) the sender is now. At step 324, the player renders the object beginning at that time according to the Tempor State ID (e. g. play).

For example, assume that the sender and recipient each have the content resident locally and that it take: eight seconds from sending the e-mail until the recipient receives it. The sender begins to play the conte and then decides to email the recipient to synchronize playing the content. By the time the recipient receives the e-mail, the sender has experienced eight seconds of the content. Hence the recipient's playe: will start playing the content an additional eight seconds into the content to that it is perfectly synchroni with the sender's experience of the content with respect to an absolute time.

An Affinity Group or Chat session refers to various communications between users through the same network including one-to-one communication, one-to-many communication, moderated orun-moderatec group communication,
Instant Messages, etc. In the context of Chat there can be multiple membership affinities based upon use defined preferences. Users can be members of multiple
Affinity Groups and each of these Groups can be controlled independently and simultaneously in terms privacy and availability parameters. Examples of some group definition are as follows: the Engineering Group available for Chat between 9: 00 AM and 5: 00 PM, Monday through Friday; a group of close family members available for Chat at all times; an Online Gaming Group available for Chat whenever tl user is playing a game on line (a user's preferences allow the user to filter the group for a specific game any game the user is playing); a No Doubt fan club available for Chat whenever the user is listening to N Doubt; a Foreign Film Group available for Chat whenever the user is on a film site registered by the use or the film site.

Dynamic Chat includes the ability to make the user available to an
Affinity Group based upon user activity or external events. For example, a user plays a piece of music through a device (PC, DVD Audio Player, Interactive TV, Handheld
Device, etc.) with an online connection (telephone, cable, cellular, satellite, etc).

Once the music begins to play (either by inserting a disk into a drive or playing a stored file), the user is made available to a Dynamic Affinity (Chat) Group based upon the music they are listening to. A screer prompt (depending upon user preference) may be displayed asking the user if they would like to chat wi others currently listening to the same or similar music. Participation in the Affinity Groupings may be overlapping because users may participate in multiple groups. The user can determine the basis or metri defining the group. For example the user may choose to chat with people listening to the same track, album, artist, or genre. If the members of the chat are interested in synchronizing the music they are listening to, a Synch Handle can be dragged from the player (see above) into the Chat Window. When tl recipient sees (receives) the Synch Handle, the recipient can activate (double-click) it and their music w be synchronized. If the recipient does not have the content or if it is on a disk not currently inserted, they are prompted to insert the disk or acquire the music.

User availability can also be influenced (dependent upon subscriber preferences) by subscription or usa information. The user can look, for example, for others watching a television program or a particular movie, others interested in recipes or a particular sport, or others in a certain situation or geographic location.

The categories, Televison, Movies, Recipes, Sports, etc, serve as metrics to assist in forming Affinity Groups.

Web sites and Chat windows can interact in a number of ways. While browsing a web site, a user can

become available to anyone else browsing that site or anyone browsing that site who shares any of the user's selection of metrics.

Technical information or support for various purposes may be facilitated by the use of Handles. For example, if the user requires technical assistance regarding a product or feature, a reference or pointer tc the source for such technical information or support may be included in the Handle. When such technic information is needed, the reference in the Handle may be used to access and download the information. Alternatively, all or part of the technical support information may be included directly in the Handle. A user may access technical support on one occasion and keep the information for future reference by stor it locally. Once information is stored locally, it may be updated by using the reference in the Handle to locate and download the updated information.

While the invention has been particularly shown and described with reference to a preferred embodimer thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention.

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Claims of **WO0043892**

WHAT IS CLAIMED IS:1. A method for transmitting media information over a network comprising th stepsof :
generating a handle at a first location where the handle identifies a media object;
transmitting the handle from the first location to a second location through the network; and
rendering the identified media object at the second location in accordance with the handle.

2. The method as in claimI wherein the generating step comprises the stepsof :
obtaining an identifier for the media object;
obtaining an identifier for each participant of a value-chain for the media object; and
combining the identifiers to form the handle.

3. The method as in claim 1 wherein the transmitting step operates to transmit at least oneof : e-mail, ch instant messaging, cell phone protocols, TV/video links, and dynamic chat 4. The method as in claim 1 further comprising the stepsof :
transmitting the handle from the second location to a server;
at the second location, receiving from the server the media object identified by the handle;
optionally, displaying the media object at the second location when the media object contains a visual portion; and
optionally, producing audio corresponding to the media object at the second location when the media object contains an audio portion.

5. The method as in claim 1 wherein the media object identified by the handle is available locally at the second location, further comprising the stepsof :
optionally, displaying the media object at the second location when the media object contains a visual portion; and
optionally, producing audio corresponding to the media object at the second location when the media object contains an audio portion.

6. The method as in claim 1, wherein the handle includes at least one of the following identifiers:

an object-id specifying a location of the media object;
a sku-id identifying a product number for the media object;
a distributor-id identifying a distributor associated with the media object;
a retailer-id identifying a retailer associated with the media object;
a channel-id identifying a channel associated with the media object;
a renderer-id identifying a software associated with the media object;
a carrier-id identifying a carrier associated with the media object;
a disk-id identifying a disk containing the media object;
a user-id identifying a user associated with the media object;
an absolute-time-id specifying the absolute time when the handle is transmitted;
a temporal-location-id specifying the amount of the media object rendered when the handle is transmitte
and
a temporal-state-id specifying the state of the media object when the handle is transmitted.

7. The method as in claim 6 wherein the handle additionally includes a set of terms that govern the rendition of the media object.

8. The method as in claim 6 wherein the handle additionally includes a reference to a set of terms that governs the rendition of the media object.

9. A method for transmitting media information among a plurality of locations over a network comprisii
the stepsof :
rendering a media object at a first location;
generating a handle at the first location where the handle identifies the media object and identifies at lea
one value-chain participant;
transmitting the handle to at least one second location over the network; and
rendering the media object at the second location using the handle.

10. The method as in claim 9 wherein the step of rendering the media object at the second location comprises the stepsof :
obtaining permission to render the media object at the second location from the at least one value-chain participant;
rendering the media object at the second location in accordance with such permission.

11. The method as in claim 9 wherein the step of rendering the media object at the second location comprises the steps of :
transmitting the handle from the second location to a server;
at the second location, receiving from the server the media object identified by the handle;
optionally, displaying the media object at the second location when the media object contains a visual portion; and
optionally, producing audio corresponding to the media object at the second location when the media object contains an audio portion.

12. The method as in claim 9, wherein the handle includes at least one of the following identifiers:
an object-id specifying a location of the media object;
a sku-id identifying a product number for the media object;
adistributor-id identifying a distributor associated with the media object;
a retailer-id identifying a retailer associated with the media object;
a channel-id identifying a channel associated with the media object;
arenderer-id identifying a software associated with the media object;
a carrier-id identifying a carrier associated with the media object;

a disk-id identifying a disk containing the media object;
a user-id identifying a user associated with the media object;
an absolute-time-id specifying the absolute time when the handle is transmitted;
a temporal-location-id specifying the amount of the media object rendered when the handle is transmitte
and
a temporal-state-id specifying the state of the media object when the handle is transmitted.

13. A method for transmitting media information among a plurality of locations over a network compris
the stepsof :
rendering a media object at a first location;
generating a handle at the first location where the handle identifies the media object;
transmitting the handle to at least one second location over the network; and
rendering the media object at the second location such that the rendition of the media object at the secor
location is synchronized with the rendition of the media object at the first location.

14. The method as in claim 13 wherein the step of rendering the media object at the second location
comprises the stepsof :
transmitting the handle from the second location to a server;
at the second location, receiving from the server the media object identified by the handle;
optionally, displaying the media object at the second location when the media object contains a visual
portion; and
optionally, producing audio corresponding to the media object at the second location when the media
object contains an audio portion.

15. The method as in claim 13, wherein the handle includes at least one of the following identifiers:
an object-id specifying a location of the media object;
a sku-id identifying a product number for the media object;
a distributor-id identifying a distributor associated with the media object;
a retailer-id identifying a retailer associated with the media object;
a channel-id identifying a channel associated with the media object;
a renderer-id identifying a software associated with the media object;
a carrier-id identifying a carrier associated with the media object;
a disk-id identifying a disk containing the media object;
a user-id identifying a user associated with the media object;
an absolute-time-id specifying the absolute time when the handle is transmitted;
a temporal-location-id specifying the amount of the media object rendered when the handle is transmitte
and
a temporal-state-id specifying the state of the media object when the handle is transmitted.

16. The method as in claim 12 further comprising the stepsof :
computing a transport time as the difference between a current absolute time and an absolute time when
the handle was transmitted; and
at the second location, rendering the media object at a position within the media object corresponding tc
temporal location incremented by the transport time.

17. A method for transmitting media information over a network comprising the stepsof :
generating a handle at a first location where the handle includes an identifier for a media object and a
reference to a technical-support source;
transmitting the handle from the first location to a second location through the network;
optionally, displaying the media object at the second location when the media object contains a visual
portion;

optionally, producing audio corresponding to the media object at the second location when the media object contains an audio portion; and
establishing access to the technical-support-source according to the reference in the handle.

18. The method as in claim 17, further comprising the stepof :
updating the technical-support-information previously downloaded from the technical-support-source.

19. A method for transmitting media information over a network comprising the stepsof :
generating a handle at a first location where the handle includes an identifier for a media object and a reference to a technical-support source;
transmitting the handle from the first location to a second location through the network;
transmitting the handle from the second location to a server through the network;
at the second location, receiving from the server the media object identified by the handle;
optionally, displaying the media object at the second location when the media object contains a visual portion;
optionally, producing audio corresponding to the media object at the second location when the media object contains an audio portion;
establishing access to the technical-support-source according to the reference in the handle; and
optionally, downloading technical-support-information from the technicalsupport-source to the second location.

20. The method as in claim 19, further comprising the stepof :
updating the technical-support-information previously downloaded from the technical-support-source.

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